623584
49E

#8600825 / 3200 - 26th AVE SW

SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT

2559

TRUCK ENTRY GATEHOUSE TERMINAL 5, PORT OF SEATTLE

Seattle, Washington

3200 26TH AV SW

RECEIVED
JAN 27 1986
ENGINEERING

Prepared For

The Port Of Seattle

GET COPY TO BILL BROWN.
CC DOT
JCWD

SPIKE COPY

RECEIVED
FEB 21 1986
Dept. of Construction & Land Use

W-4734
January 1986

RZA

RITTENHOUSE-ZEMAN & ASSOCIATES

Geotechnical Consultants

SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT
TRUCK ENTRY GATEHOUSE, TERMINAL 5, PORT OF SEATTLE
SEATTLE, WASHINGTON

1.0 SUMMARY

The proposed project construction is feasible with respect to the subsurface conditions encountered at the site. A brief summary of the project geotechnical considerations is presented below:

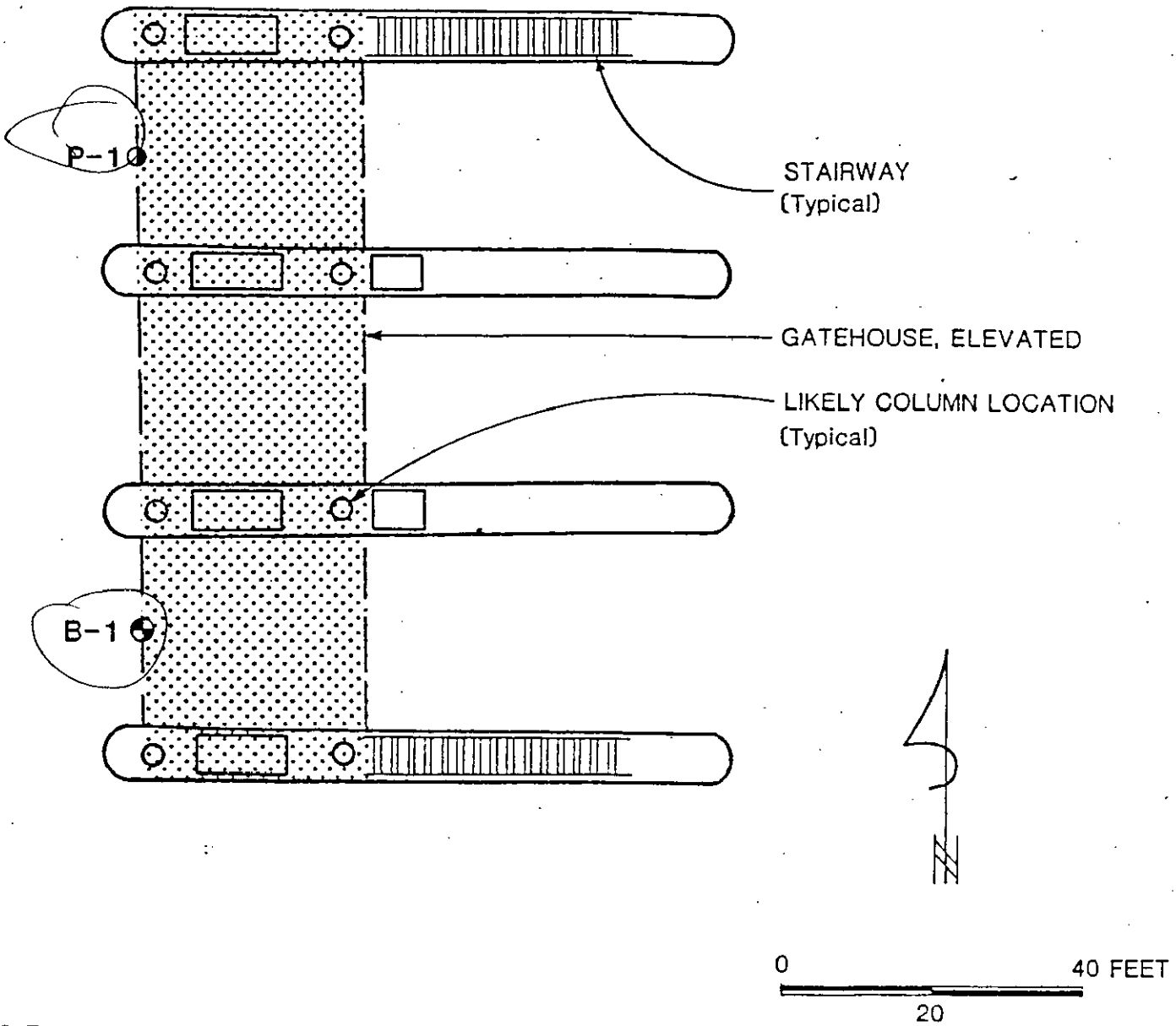
- The project site is located on the west side of 26th Avenue S.W. (vacated) aproximately 1200 feet north of West Marginal Way in the West Seattle district of Seattle, Washington.

- Our subsurface explorations generally disclosed loose to medium dense, clean fine sand to a depth of 31 feet, grading to medium dense to dense clean, fine sand from 31 feet to 48 feet, the maximum depth explored.

- The zone extending from approximately 5 feet to 21 feet in depth is generally loose and saturated and is consequently susceptible to liquefaction.

- To limit potentially damaging total and differential settlements resulting from static and seismic loads, we recommend that the structure be pile supported. The piles should be displacement type piles, preferrably treated timber, and should be driven to a maximum total depth of approximately 40 feet below existing grade.

- Timber piles with 8 inch and 10 inch tip diameters, driven to a maximum depth of 40 feet, will have allowable vertical capacities of 20 tons and 30 tons, respectively. We estimate the total settlement to be on the order of 3/4 inch, with differential settlement approximately one-half of the total settlement.



LEGEND

B-1 INDICATES BORING NUMBER AND APPROXIMATE LOCATION

P-1 INDICATES STATIC CONE PENETROMETER PROBE NUMBER AND APPROXIMATE LOCATION

TRUCK ENTRY GATEHOUSE
TERMINAL 5, PORT OF SEATTLE

SITE & EXPLORATION PLAN
FIGURE 1

NOTE:

BASE MAP FROM DEC 26, 1985
SITE SKETCH BY JORDAN/CASPER/
WOODMAN/DOBSON.

W.O.	W-4734
By	PRM
Date	JAN 86
Scale	NOTED

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.
Geotechnical Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005

STATIC CONE PENETROMETER
PROBE NO. P-1

Soil Interpretation

5 Medium dense to dense, clean fine sand

10 Loose to medium dense, clean fine sand

15 Loose to medium dense, interbedded clean find sand and silty fine sand

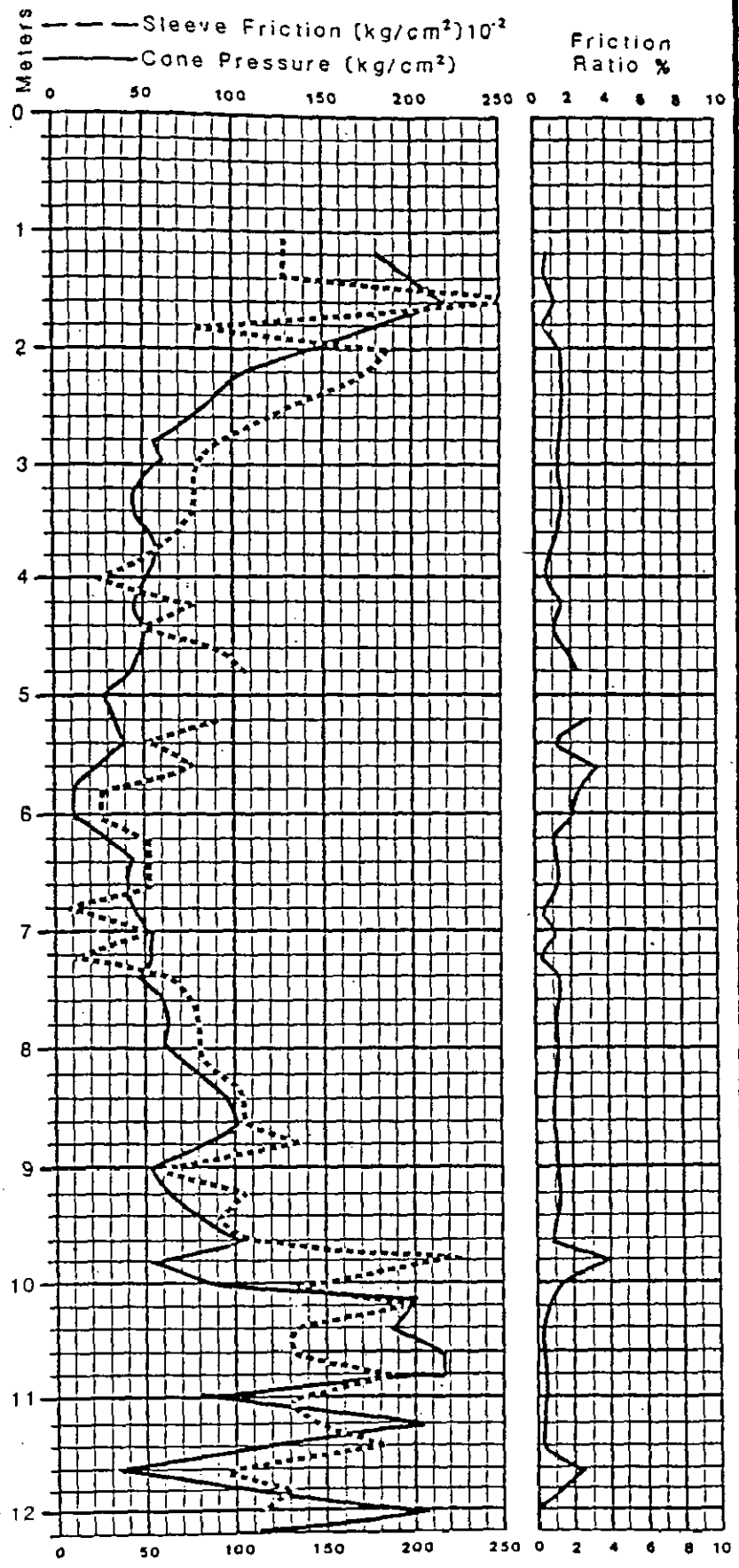
20

25 Loose to medium dense, clean fine sand

30

35 Medium dense to dense, clean fine sand with scattered interbeds of silty find sand

40



W.O.: W-4734

Project: Truck Entry Gate; Port of Seattle

Date: 8 January 1986

Approx. Ground Surface Elev.: 19 Feet (MLLW Datum)

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.

Geotechnical Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005

RZA

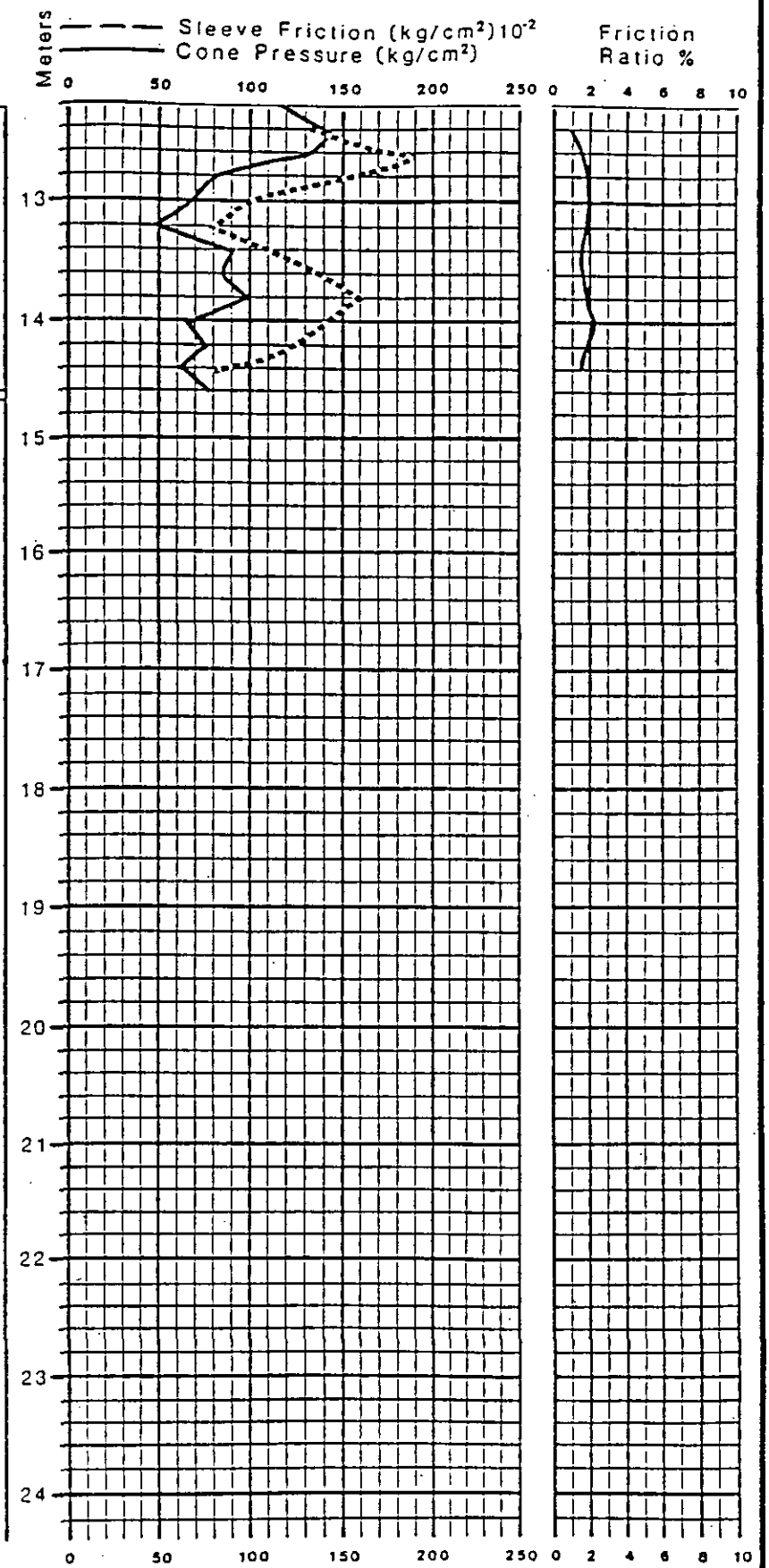
STATIC CONE PENETROMETER
PROBE NO. P-1 Cont'd.

Soil Interpretation

Loose to medium dense, clean fine sand

45

50 Probe terminated at 48 feet
Completed 8 January 1986



W.O.: (cont.)

Project:

Date:

Approx. Ground Surface Elev.:

RITTENHOUSE-ZEMAN & ASSOCIATES, INC.

Geotechnical Consultants
1400 140th Avenue N.E.
Bellevue, Washington 98005

RZA